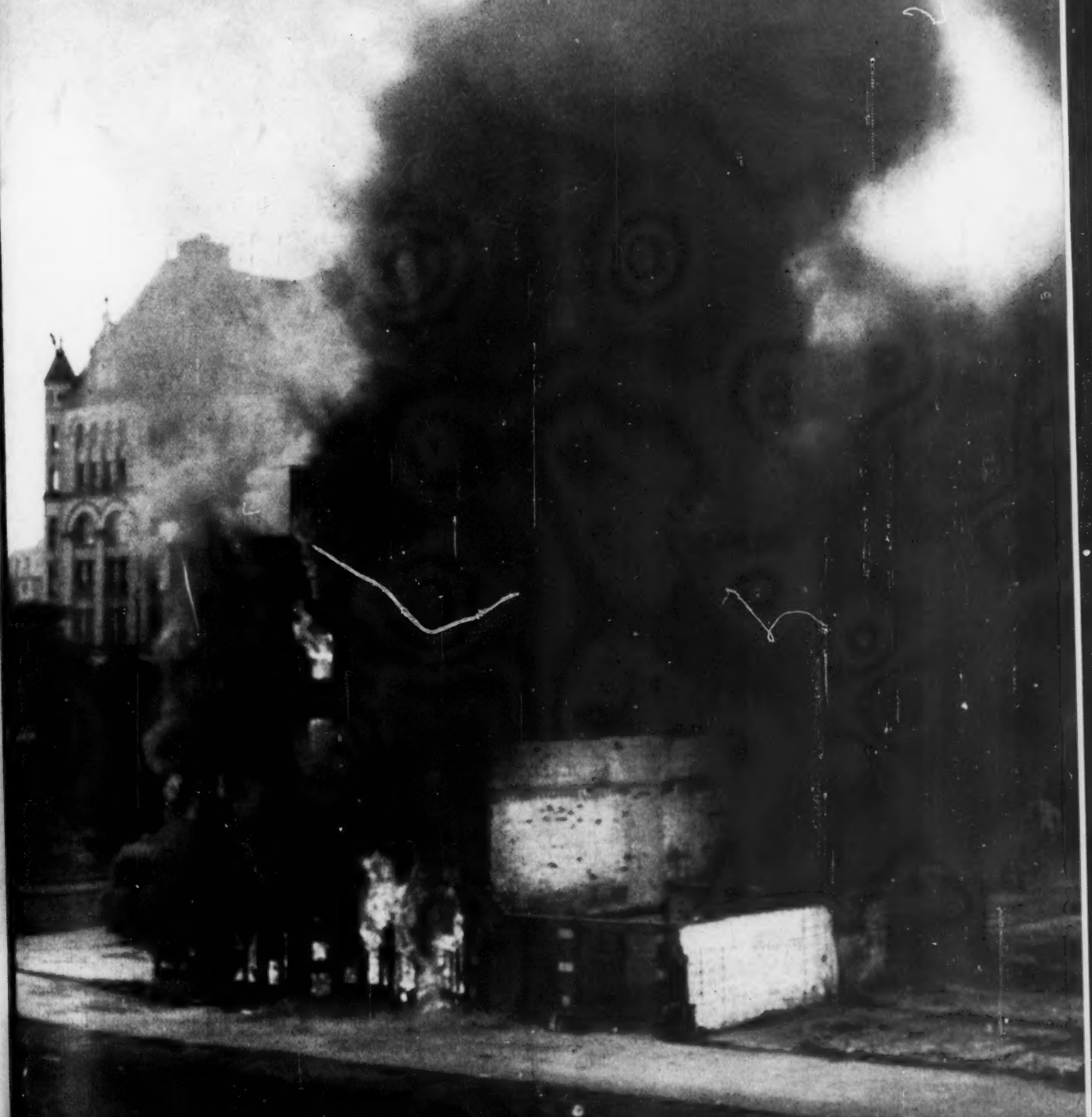
Industrial Standardization

and Commercial Standards Monthly



August

See Article on Page 217

1937

This Issue: ***Our Front Cover: Fire tests for building materials and construction being carried out by the National Bureau of Standards in the Mall, Washington, D. C.***

ASA

AMERICAN STANDARDS ASSOCIATION

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AUGUST 1937

INDUSTRIAL STANDARDIZATION AND COMMERCIAL STANDARDS MONTHLY is published by the American Standards Association, 29 West 39th Street, New York, with the cooperation of the National Bureau of Standards

Vol. 8 No. 8

Subscription price $4.00 per year U. S. and Canada (foreign $5.00); single copies 35 cents

About 35 cents of every dollar paid by taxpayers is used to buy commodities for Federal, state, county, and municipal governments. The important role of standards is shown in this article by an eminent authority on centralized purchasing.

Standards Are Effective Tool To Save Taxpayers' Dollars

by

Joseph W. Nicholson

Purchasing Agent, City of Milwaukee

FROM 30 to 40 per cent of every tax dollar is spent for commodities. Centralized purchasing under competent non-political personnel in use in 36 states and over 200 cities and counties of this country is a definite tangible means by which we can conserve this large share of our government expenditures.

What is Centralized Purchasing?—Dr. Russell Forbes, best known national authority on public purchasing, former professor of government at New York University and now Commissioner of Purchases, city of New York, defines it as "The delegation to one office of the authority to buy supplies, materials and equipment needed by all the operating branches of an organization."

Why Is It Needed?—Let us refer to business practice of industry for the answer. So far as I know, every large industry and utility in this country has a purchasing department. Concerns manufacturing the same class of merchandise must compete with each other. In order to do so

A Standards Stalwart

Joseph W. Nicholson, Purchasing Agent of the City of Milwaukee, has found the importance of standards in purchasing millions of dollars worth of commodities for his city. This is his story.—*Editor.*

Standards

When we measure or judge the value of an article we use a standard. manufacturer's reputation, or a distributor's knowledge of our needs, that is, perhaps even unconsciously, set up as a measuring stick.
these, perhaps even unconsciously, set up as a measuring stick.

The best standards are definite and tangible and are identified by their sponsorship and use. Without those qualities the standard is subject to abuse by elastic interpretation and may lose its value through obsolescence. If your needs are of sufficient importance to set up a standard and keep it modernized, that may be advisable, and large corporate users do so when necessary.

Ordinarily, the standards developed and sponsored by our recognized standardization agencies are the best obtainable. They have all the essential qualities and meet the requirements of all interested parties—producers, distributors, and consumers.—*G. A. Renard, Executive Secretary-Treasurer, National Association of Purchasing Agents.*

successfully, they must operate on the most efficient basis possible. This means cutting corners and eliminating lost motion and waste in order to reduce overhead expense.

It involves obtaining suitable materials at the best market prices, and doing an infinite amount of scheming and planning in order to produce an article which can be sold in competition with others. For this reason these plants have long ago found it absolutely necessary to centralize their purchases under qualified purchasing agents whose duties are to watch the markets and purchase the right quantity and quality of goods at the right time in order that plants may not run out of production material, or find themselves overstocked with raw material on a falling market which would result in severe losses.

How Does Centralized Public Purchasing Operate?—As a rule the purchasing agent is appointed by the mayor or city manager and is made responsible to them. The purchasing agent usually refers large purchases exceeding a stipulated amount as well as controversial and policy matters to the higher authority. All requisitions for materials, supplies, equipment, and minor service are sent by departments to the purchasing agent who classifies them according to commodities. If the articles are on hand in municipal warehouses, the warehouse truck makes the delivery on its regular schedule. If the commodities are under term contract, the vendor delivers direct to the department. If not on hand or under contract, competitive bids are usually obtained through direct mail solicitation plus newspaper advertising on large purchases.

How Much Will This System Save?—Statistics gathered throughout the country prove that average savings of 15 per cent are brought about through the efficient operation of a central purchasing department. There are many reports and pamphlets available, citing the specific savings made in various localities. For example, the State of California organization of state, county, and municipal purchasing agents pointed out to the State Legislature the savings which had been made by centralizing state and municipal purchases and recommended that all county school purchases be centralized. They presented information showing that under the decentralized system, superintendents and principals of district schools have been oversold and overstocked with commodities which would last them 20 to 30 years and that they paid "57 varieties" of prices for the same commodities. These troubles are eliminated in an effective central purchasing plan as the purchasing authority checks stocks on hand and lets contracts for staple commodities. For example:

(*a*). **Contracts for immediate delivery to be stored at some central warehouse.**

(*b*). **Contracts for deliveries of stipulated quantities to be made to a central warehouse or to departments anywhere in the city at any time during the life of the contract.**

In this manner the many thousands of small articles, such as stationery, mops, brushes, pails, street brooms, toilet paper, paper towels, ash baskets, cleaning powder, soap, ax handles, flashlight batteries, waste and wipers, etc., are kept on hand or under contract so that immediate deliveries can be made to departments when these commodities are needed and still take advantage of wholesale prices by contracting for these commodities in sufficient quantities to warrant low prices.

The Value of Competitive Bids.—Competi-

tive bids reduce prices without affecting quality. In many cases, such as bids on printing, prices have been cut in half. It was necessary to purchase without bids 7,500 safety lessons or printed forms used by the Milwaukee Safety Commission in school work. We placed this order with a responsible firm who had transacted business with the city for a number of years and who we believed would not "soak" the city. We paid them $75 for the job. However, on the next issue, we had time to take bids and received 14, ranging from $37 to $67.25. The low bid was satisfactory.

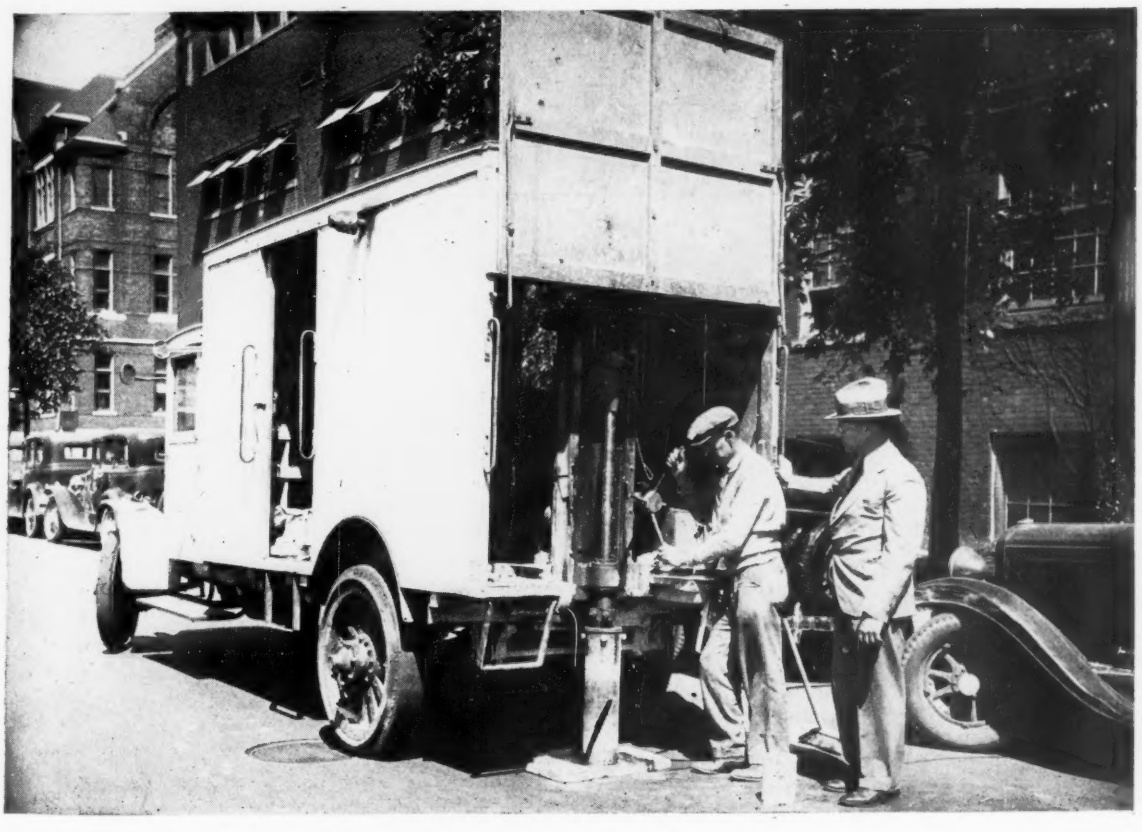
Many private executives have stated that they prefer to deal with one firm to assure the delivery of the quality of merchandise which they are accusomed to using and at a fair price.

In public purchasing this procedure is not recommended except in unusual cases such as in the purchase of steam cylinder oils used in valuable water works pumping engines.

While it is true that no matter what brand of oil you may be using in these engines, you could undoubtedly obtain another brand at a lower price, yet when you consider the extent of damage which might be done to these engines due to experimenting with an unsuitable grade of oil, the hazards incident upon shutting down such a plant and the excessive cost of repairs in reboring scored cylinders, replacing piston rings, etc., you would not be justified in taking a chance of doing this damage for the sake of saving a cent or two per gallon of oil purchased. As a matter of fact, the cost of all the oil used in the two pumping stations which supply water to Milwaukee's 600,000 inhabitants, amounts to only $1,800 per year, while the price of just one of the enormous triple expansion pumping engines used amounts to over $250,000. This and a number of special cases should be recognized by the purchasing authority.

In other words, price is only one of the considerations in efficient purchasing. Quality, the suitability of the article for the purpose intended, and service are of equal importance. Therefore, to correctly measure the value of centralized pur-

Milwaukee tests pavements for thickness and strength by drilling out 6-inch cores. This drill, purchased in 1929, has cut nearly 6,000 cores from Milwaukee streets. Compression tests of cores show whether pavement is up to the required standard.



chasing, we must consider not only the actual saving in first cost but whether the goods meet the requirements, last longer, and whether they are delivered promptly when needed.

Standards and Specifications.—Centralized purchasing provides a means of simplifying and standardizing purchases so that departments using materials for similar purposes will all obtain the same article, which then can be purchased in wholesale quantities and in car lots if the quantity warrants, thereby effecting tremendous savings.

This applies to many articles commonly used, such as toilet paper, paper towels, office supplies, etc. For example, cleaning powder sold under brand names, consisting in the main of trisodium phosphate, ground fine, and in some cases with other ingredients which do not add to the cleaning value, was purchased in Milwaukee until about ten years ago from a number of manufacturers and dealers at prices ranging from 10 cents to 17 cents per pound. The 17 cent article had a little copper sulphate in it giving it a blue color, which according to the salesman made it much better than any other powder we could possibly buy. Incidentally he later changed companies and came in again offering a plain white powder for 15 cents per pound claiming it to be better than any other powder and was surprised to find that I remembered his former connection and statements. This powder has been purchased in hundred-pound kegs labeled "City of Milwaukee Cleaning Powder", at prices which never have exceeded 4 cents per pound. We now have a substantial stock on hand which cost 3.2 cents per pound.

Recently one of our hospitals tried a trade-named powder in their dishwashing machine. It was very effective. The price in quantities was 9 cents per pound. A test at the chemical laboratory showed it to consist merely of coarse crystals of tri-sodium phosphate. The hospital is now using our stock powder at 3.2 cents per pound and finds it more satisfactory as it dissolves quicker because of the fine grinding.

Radios, Autos, Air Compressors

Even complex equipment, such as motor vehicles, police radios, and air compressors are purchased on specifications. A questionnaire is sometimes used in which factory engineers set forth in their bids the engineering data necessary to make a fair comparison of the machines quoted upon. At times, equipment is purchased on a performance test. For example, an air compressor is required to be of substantial construction and to deliver not less than ——— number of cubic feet of air per minute at a certain number of revolutions per minute.

Centralization of purchases promotes scientific and intelligent buying. For example, automobile tires should not be purchased on the price of the tire alone but instead on the cost per mile as shown by average mileages of each particular make of tire used in city service. Dividing the bid price of a commonly used size of tire by the average mileage shown by city records of each particular make gives you the cost per mile of each make of tire. The award can then be made on the basis of the lowest cost per mile and the department can test other makes of well-known tires during the year so that when the matter is up for consideration mileage records will be at hand.

First Standards for Coal

Likewise, coal should not be purchased on a ton basis unless there is some guaranteed analysis or some means is provided for payment on the basis of the actual fuel value delivered. This procedure has been followed by many cities for years, especially in our city, where in 1917 we chose this commodity as the first item on which to standardize and have since purchased it on the basis of the actual fuel value received, or on what is commonly known as the Btu basis.

City departments compete with each other in the same market when there is no central department, and as a result, pay higher prices. But, if you mention centralized purchasing to some school authorities, they will throw up their hands and declare that it would be a catastrophe to centralize their purchases in the city hall. "How could a general purchasing agent possibly know anything about school problems? Why it's unthinkable!"

Granting that textbooks should not be purchased by general purchasing agents, I cannot agree that motor vehicles run any differently for the school board than they do for the department of public works. Gasoline, motor oil, tires, furniture, stationery, and standard supplies should be purchased by the general purchasing agent. An electric lamp bulb will burn just as well in the school room as in the mayor's office and every Btu in a pound of coal will do the same work in a school board boiler as it will do in the city hall boiler.

If the head of a department knows what he wants, he can describe it in words which an experienced chemist or engineer can translate into a definite specification. Undoubtedly, it will be found from the description that there are specifications in existence which cover the particular commodity in question. Every up-to-date pur-

Milwaukee's Police Department Uses Radio Equipment Purchased on Specifications — Control Panel and Operator's Desk Police Radio Station WPDK

chasing department has a complete file of specifications which have been gleaned with patient labor from many sources including the National Bureau of Standards, the American Society for Testing Materials, and the American Standards Association. The U. S. Directory of Specifications is particularly helpful in this regard. He will also have on file specifications of various kinds prepared by heads of departments, city engineers, and chemists. In preparing these specifications, the head of the department may find that there are other makes of merchandise, costing less, which will serve the same purpose.

The highest priced article is not always the best nor is the best always necessary. When a cheaper article is used for temporary or intermittent service, it saves money and does the work just as well for the short period of time that it is required to be used.

The purchasing agent does not come in and tell the department head what he should have. On the contrary, after having taken competitive bids on an open specification, which in many cases clarifies in the mind of the head of the department the article he would like to have, he discusses these bids with the head of the department and together they select the lowest bid complying with the specifications. Therefore, if a department head actually knows what he wants, he can describe it in words, which clears the way for competitive bids.

Our chief of police was only too pleased to direct many racketeering radio transmitter salesmen to the city purchasing department when our police radio was to be purchased. The chief, an independent radio engineer, and the purchasing agent drew the specifications jointly after visiting several cities where transmitters were in use. Significantly enough, after the bids went out on definite specifications, the army of racketeering and shoestring salesmen melted away and competitive bids were received only from legitimate, well-established firms. This resulted in the award of a contract for a 500-watt station, including complete equipment with receiving sets for eighteen squad cars, for only $15,000. This did not include aerial towers for the transmitting station and instead of purchasing two regular radio towers for $2,500, we purchased two windmill towers for $336. These towers have been kept painted and are as good now as the day they were put up.

Tests Insure Compliance

Centralized purchasing facilitates the testing of deliveries to insure compliance with city specifications. It also provides a means of centralizing stores control so that stocks on hand in the various city storehouses may be transferred from one to the other and one department will not be buying an article for stock which another department has on hand.

The question has been raised as to whether a central municipal storehouse is a profitable venture. We find from our experience that when a municipal storehouse is operated with the smallest amount of stock required to give service, having a turnover of approximately four times a year, having no articles which deteriorate, it is a paying proposition and that considerable savings have been effected in this manner.

New York Adopts New Building Code

The new Building Code of the City of New York was adopted by the Board of Aldermen and signed by Mayor LaGuardia Tuesday, July 27. The code will become effective on January 1, 1938.

"The new code," says Louis K. Comstock, president of the Merchants Association of New York, which prepared the revision, "contains many things which builders have needed for a long time. It also opens the way for many helpful economies in the proper use of new materials and by utilizing the latest building methods. Following its adoption on Jan. 1, there should be a marked stimulus in the building industry throughout the entire city."

Some of the oustanding new provisions include changes in classification of structures based on fire resistance of the materials as determined by the standard fire test, higher allowable working stresses for structural steel, use of fusion welding, requirement for adequate fresh air supply to insure proper combustion in order to eliminate smoke, up-to-date elevator safety requirements, and a new and more adequate system for determining the required size of soil, waste, and vent pipes.

Committee On Zinc Coating Is Widely Representative

Through an oversight, the list of members of the Sectional Committee on Zinc Coating of Iron and Steel (G8) on page 188 of the July issue of *Industrial Standardization* included only part of the members of the committee. This committee reviewed the Standard Specifications on Zinc-Coated (Galvanized) Wrought-Iron Sheets described in the article "Standards Now Define Wrought-Iron Sheets" (July, p. 186), and recommended that the American Standards Association approve them.

The committee, which is listed in full below, is widely representative of the organizations interested in the standard:

J. A. Capp*, American Society for Testing Materials, *Chairman

A. B. Campbell*, Edison Electric Institute, *Secretary

American Society for Testing Materials (Sponsor), *John A. Capp, H. O. Hill, E. F. Lundeen, H. E. Smith*

American Association of Port Authorities, *Charles W. Staniford*

American Electro-Platers Society, *G. B. Hogaboom*

American Gas Association

American Institute of Architects, *Theodore I. Coe*

American Institute of Mining and Metallurgical Engineers, *W. M. Peirce*

American Marine Standards Committee, *Horace H. Thayer*

American Petroleum Institute, *J. G. Detwiler*

American Society of Agricultural Engineers, *K. J. T. Ekblaw*

American Society of Refrigerating Engineers, *A. P. Dougherty*

American Transit Association, *H. S. Murphy, L. R. Wagner*

American Water Works Association, *R. C. Ewry*

American Zinc Institute, *George C. Bartells*

Association of American Railroads, Engineering Division, Construction and Maintenance Section, Roadway Committee, *W. C. Pruett, H. H. Harman (alt.)*

Association of American Railroads, Engineering Division, Construction and Maintenance Section, Water Service, Fire Protection and Sanitation Committee, *J. J. Laudig, C. P. Van Gundy (alt.)*

Association of American Railroads, Operating Division, Telephone and Telegraph Section, *J. A. Jones*

Association of American Steel Manufacturers Technical Committees, *G. A. Reinhardt, W. R. Shimer, F. N. Speller, E. S. Talyerson, R. H. Dibble (alt.)*

Electric Light and Power Group, *A. R. Campbell (alt.)*

Manufacturers Standardization Society of the Valve and Fittings Industry, *F. H. Morehead*

National Association of Flat Rolled Steel Manufacturers, *R. W. Baker*

National Association of Purchasing Agents, *D. L. Bartlett*

National Electrical Manufacturers Association, *W. L. Maucher, F. L. Wolf*

Society of Automotive Engineers, Automobiles, *W. M. Phillips.*

Society of Automotive Engineers, Parts, *W. H. Hutchins*

Society of Naval Architects and Marine Engineers, *Horace H. Thayer*

Telegraph Interests, *C. E. Mobius, W. F. Markley, (alt.)*

Telephone Group, *C. D. Hocker, S. C. Miller, C. S. Gordon (alt.)*

U. S. Department of Agriculture, Bureau of Public Roads, *L. G. Carmick*

U. S. Department of Commerce, National Bureau of Standards, *H. S. Rawdon*

U. S. Navy Department, Bureau of Yards and Docks, *H. A. Stacy*

U. S. War Department, Ordnance Department, *P. R. Kosting*

Members-at-large, *L. W. Hopkins, J. L. Schueler,*

Liaison, *A. T. Enlow*

British Standard Is Basis For Fire Resistance Tests

Standard definitions for fire resistance published by the British Standards Institution[1] are the basis for tests now being conducted by the British Fire Offices Committee at its new laboratory at Elstree. By means of these tests walls, floors, and columns of various materials are classified into grades showing what protection may be expected against fire for various periods from half an hour up to six hours. With these data it is expected, according to W. W. Davies, of the British Building Research Station, that building authorities will revise their regulations and bring them into line with the new conceptions of fire resistance embodied in the British standard definitions.

"The existence of skyscrapers in American cities is undoubtedly one of the main reasons why the subject of fire resistance has been much more thoroughly studied in the United States than anywhere else," Mr. Davies said. "It would not require much imagination to picture what would happen if the Empire State Building went up in flames; and it is only because the Americans have studied the problem of fire resistance very carefully that they can say with absolute certainty that such a catastrophe would be impossible.

"Another reason for increased attention to fire resistance lies in the variety of new materials and methods of construction which have been introduced in the last few years. Many of these have already proved their structural value, but their fire resisting properties are still very largely a matter for conjecture. It is of the utmost importance that these properties should be known and compared with those of existing materials."

[1]B.S.S. No. 476.

Fire tests by the National Bureau of Standards give data for American Standards.

Procedures for fire resistance tests in the United States are set down in the American Standard for Fire Tests of Building Construction and Materials (A2-1934; A.S.T.M. C19-33). Fire tests are kept current with technological developments by a sectional committee under the administrative leadership of the American Society for Testing Materials, the National Bureau of Standards, and the ASA Fire Protection Group which consists of the National Board of Fire Underwriters, the National Fire Protection Association, the Associated Factory Mutual Fire Insurance Companies, and the Underwriters' Laboratories.

OUR FRONT COVER

When buildings in the Mall at Washington, D. C., were to be razed several years ago, they furnished excellent subjects for checking the reliability of the American Standard fire tests. The buildings were burned under the direction of the National Bureau of Standards, in order to determine the severity of fires and how records in safes could be protected.

The Bureau regularly carries on investigations to obtain information for the continued development of the standard fire tests.

Association Appoints Committee To Develop Dust-Control Standards

The Dust Control Equipment Association has appointed an engineering committee to develop standards for dust-control practice. The committee will be available for consultation by other associations or groups interested in the preparation of codes, the development of regulations, etc.

Officers of the Association are: H. B. Loxterman, Blaw-Knox Company, *president;* M. A. Eiben, Northern Blower Company, *vice-president;* Arthur J. Tuscany, *executive secretary-treasurer.*

A.S.T.M. Organizes New Committees

THE organization of a number of new technical committees and extension of the activities of several existing committees were reported at the Annual Meeting of the American Society for Testing Materials late in June.

During the past year two new committees—one on soaps and detergents, and the other on soils for engineering purposes—were organized and work in these fields has been started by both committees.

Paper, Glass, Plastics

Three new committees, the organization of which has been under development for some months, have been authorized by the Society. These are Committee D-6 on Paper and Paper Products, Committee C-14 on Glass and Glass Products, and Committee D-20 on Plastics.

It is expected that Committee D-6 will first deal with paper-testing methods and nomenclature, interpretation and significance of test methods, and methods of test and specifications for certain types of paper products, such as multiwall paper bags and paper for fiber-board shipping containers. A subcommittee on paper shipping containers has already been organized.

The committee on glass was set up as a result of a proposal from the American Ceramic Society that such a committee be organized and that it might also act as a channel for American activities. "Glass is rapidly assuming an important place as a material of engineering and there is a real need for recognized standards," says the A.S.T.M. Executive Committee in its annual report. Six subcommittees have already been organized to work on nomenclature; chemical analysis; chemical, physical and mechanical, and thermal properties; and glass construction block and tile.

The third new committee, on Plastics, will start work soon on standard methods of testing plastics, it is planned.

Electrical Committee to Cooperate

A.S.T.M. Committee D-9 on Electrical Insulating Materials has for some years been studying the materials covered by these three new committees — paper, glass, and plastics. This committee has been working from the viewpoint of electrical properties of these materials, especially, but also including certain physical and mechanical properties important in the use of these materials for electrical insulation. Several standards in this field, which were handled through Committee D-9, have been considered by the Sectional Committee on Electrical Insulating Materials (ASA C59) and approved as American Standard. Committee D-9 will retain jurisdiction of A.S.T.M. standards involving electrical properties and will cooperate with the new committees in the development of standards for other properties.

Organization of a new A.S.T.M. committee on thermal insulating materials, authorized some months back by the A.S.T.M. Executive Committee, is progressing favorably. The work of this committee will not include high-temperature thermal insulating materials because such materials are covered by Committee C-8 on Refractories.

Manufactured Masonry Units

Two committees—Committee C-3 on brick and Committee C-10 on hollow masonry building units—have now been merged into a single committee on manufactured masonry units designated as Committee C-15. This single committee now will handle standards for products formerly under the jurisdiction of both these groups, as well as such new masonry products as glazed building units, double brick, and other forms sometimes designated as tile and sometimes as brick. Essentially the same groups of consumers and general interests are involved in the testing and specifying of all the products to be covered by the new committee.

The work of the American Society for Testing Materials is being extended into the rapidly developing field of radio, the A.S.T.M. Executive Committee reports. Methods of test and specifications for metallic materials used in the manufacture of radio tubes and incandescent lamps are being added to the work of the A.S.T.M. Committee on Electrical Heating, Electrical-Resistance, and Electric-Furnace Alloys (B-4). Most of these metals are of the heat-resistance and electrical-resistance type covered by Committee B-4. These tests and specifications were added to the scope of this committee at the request of the Radio Manufacturers Association. Another A.S.T.M. committee, Committee D-9 on Insulating Materials, is also working on radio problems.

Courtesy Capital Transit Co.

Street Car Public Finds Pleasure In Cars With New Standard Motors

SPEED, quiet, and easy braking are making the street-car-riding public in Washington, D. C., conscious of an unusual pleasure in using street cars, reports R. H. Dalgleish, chief engineer of the Capital Transit Company. Twenty cars of the streamline type operated by motors meeting the requirements of the revised American Tentative Standards for Rotating Electrical Equipment for Rail Cars and Locomotives are responsible for this new pleasure in street-car riding.

Courtesy American Transit Assn.

Streamlined cars designed by the President's Conference Committee of the American Transit Association use light-weight motors suspended on the springs of the truck, not on the axle. These motors meet the requirements of standards approved by the American Standards Association.

After reading the article about the revised standards in the February issue of INDUSTRIAL STANDARDIZATION, page 31, Mr. Dalgleish writes:

"It might be of interest to you to know that we have had in operation for 18 months 20 cars of the streamline type with motors suspended on the springs of the truck and not on the axle, and mounted parallel to the axle. These cars weigh 35,000 pounds, have four 50-horsepower motors, and are giving us acceleration at the rate of 4½ miles per hour per second. With the magnetic track brake and air brakes, we are obtaining braking rates of 4½ miles per hour per second in service application and 8 miles per hour per second in emergency.

"These cars have been operating most satisfactorily and the public has been very much pleased with them due to the fact that they are

fast and the noise has been largely eliminated. This is because the motors have been removed from the axles, and rubber in shear has been used for load-carrying spring in the trucks in place of steel.

"We have recently ordered 45 new cars of the type designed by the President's Conference Committee of the American Transit Association on which the right-angle drive and hypoid gear will be used. There has been quite a difference in the design of street cars since the study of the P. C. C. Committee, and we are now beginning to feel some of the benefits from this more attractive vehicle."

Mr. Dalgleish was a member of the technical committee which prepared the American Tentative Standards for railway motors under the administrative direction of the American Institute of Electrical Engineers, according to the procedure of the American Standards Association.

A.S.T.M. Takes Action To Revise Standards

Action was taken at the annual meeting of the American Society for Testing Materials, in June, to bring about revisions in a number of American Standards. The proposed revisions will be sent to letter ballot vote of the A.S.T.M. on September 1, and if accepted, they will be offered to the American Standards Association for apprvoal.

The standards on which revisions have been suggested are:

Specifications for Portland Cement—A1a-1931 (A.S.T.M. C9-30)
Method of Test for Voids in Fine Aggregate for Concrete—A19-1923 (A.S.T.M. C30-22)
Methods of Testing Molded Materials Used for Electrical Insulation—C59.1-1935 (A.S.T.M. D48-33)
Classification of Coals by Rank—M20.1-1936 (A.S.T.M. D388-36T)
Classification of Coals by Grade—M20.2-1936 (A.S.T.M. D389-34T)
Method of Test for Melting Point of Paraffin Wax—Z11.4-1928 (A.S.T.M. D87-22; A.P.I. 513-29)
Method of Analysis of Grease—Z11.16-1928 (A.S.T.M. D128-27; A.P.I. 509-29)
Method of Test for Gravity of Petroleum Products by Means of the Hydrometer—Z11.31-1936 (A.S.T.M. D287-36; A.P.I. 526-36)
Methods of Laboratory Sampling and Analysis of Coal and Coke—K18-1933 (A.S.T.M. D271-33)
Methods of Routine Analysis of Dry Red Lead—K16.1-1935 (A.S.T.M. D49-35)
Bronze Trolley Wire—H22.1-1937 (A.S.T.M. B9-36)
Copper Trolley Wire—H22.2-1937 (A.S.T.M. B47-36)
Methods of Test for Knock Characteristics of Motor Fuels—Z11.37-1936 (A.S.T.M. D357-36T)
Viscosity Temperature Chart for Liquid Petroleum Products—Z11.9-1935 (A.S.T.M. D341-32T)

Of these standards, the methods of test for voids and fine aggregates for concrete, methods of laboratory sampling analysis of coal and coke, methods of routine analysis of dry red lead, and specifications for bronze trolley wire and for copper trolley wire are being revised by the A.S.T.M. under the proprietary method. The rest of the standards listed have been acted upon by sectional committees for which the A.S.T.M. is sponsor. Tentative revisions, which were approved for publication only, were presented at the meeting in the following standards:

Welded Wrought-Iron Pipe—B36.2-1934 (A.S.T.M. A72-33)
Zinc-Coated (Galvanized) Wrought-Iron Sheets—G8.8-1937 (A.S.T.M. A163-36)
Structural Rivet Steel—G21-1936 (A.S.T.M. A141-36)
Uncoated Wrought-Iron Sheets—G23-1937 (A.S.T.M. A162-36)
Methods of Laboratory Sampling and Analysis of Coal and Coke—K18-1933 (A.S.T.M. D271-33)
Method of Sampling Coal—X1-1921 (A.S.T.M. D21-16)
Methods of Test for Resistivity of Insulating Materials—C59.3-1935 (A.S.T.M. D257-33)
General Methods of Testing Woven Textile Fabrics L5-1936 (A.S.T.M. D39-36)
Specifications for Zinc Oxide—K22-1937 (A.S.T.M. D79-24)

Information regarding these revisions may be obtained from the ASA office or from the A.S.T.M. headquarters at 260 South Broad Street, Philadelphia, Pa.

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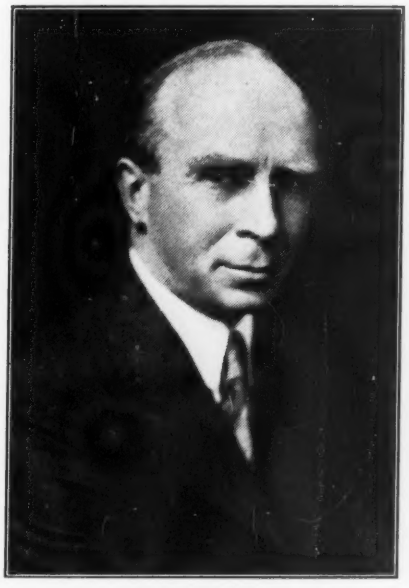
Upholstery Maker Urges Standard Conditions For Seeing Color

Seeing color under standard conditions is one of the important problems facing automobile engineers, stylists, and upholstery people, as well as paint technologists, said W. F. Bird, director of research, Collins & Aikman, at the April meeting of the Society of Automotive Engineers' Detroit Section.

Variability in the direction from which the light comes, variations in atmospheric conditions, reflections, amount of clouds, etc., affect the appearance of the colors and may influence inspectors to reject the product.

It has been recommended, Mr. Bird said, that a standard daylight lamp which will provide a uniform light source anywhere in the United States should be used in selecting and checking automobile upholstery fabrics.

ASA Board Elects Collens



C. L. Collens

Clarence L. Collens, president, Reliance Electric and Engineering Company, Cleveland, has been elected to membership on the Board of Directors of the American Standards Association on nomination of the National Electrical Manufacturers Association, succeeding S. L. Nicholson.

Mr. Collens, who is a past-president of N.E.M.A., is familiar with the work of the American Standards Association, having been a member of the Board from 1929 to 1932.

Mr. Collens is active in the electrical industry. He has served as president of the Electric Power Club, chairman of the Electrical Manufacturers Council, representative of the electrical manufacturers on the Board of the National Industrial Conference Board, president of the National Electrical Manufacturers Association, and as Chairman of the Code Advisory Committee of NEMA.

He is now Supervisory Agency of the Industrial Apparatus Classification under the Electrical Manufacturers' Code, and a member of the NEMA Code Committee.

To Succeed S. L. Nicholson

S. L. Nicholson Retires From Active Duties

S. L. Nicholson, who had been active in the work of the American Standards Association since 1925, serving as a member of the ASA Board of Directors, Standards Council, and Electrical Standards Committee, retired from active business July 1, and resigned his connections with the ASA.

Mr. Nicholson was assistant to the vice-president of the Westinghouse Electric & Manufacturing Company. He represented the National Electrical Manufacturers Association on the ASA Standards Council, and was nominated by N.E.M.A. for membership on the ASA Board of Directors.

Helped Build Industry

For the past 50 years he has been active in building up the electrical industry, and has assisted in the development of four generations of electrical manufacturers' associations—the present National Manufacturers Association, its predecessor organizations (the Electrical Power Club, the Associated Manufacturers of Electrical Supplies, and the Electrical Manufacturers Council), as well as the earlier organizations from which these were formed.

Mr. Nicholson is credited with originating the plan to reorganize the Electrical Committee of the National Fire Protection Association as a sectional committee, bringing the National Electrical Code under the procedure of the American Standards Association. He is also credited with originating and helping to develop the Model Electrical Ordinance which has in many cases superseded conflicting local ordinances and has given the status of prima facie evidence of compliance with good practice to the National Electrical Code and National Electrical Safety Code approved by the American Standards Association.

The Standards Council adopted the following resolution:

RESOLVED: That the Council express its appreciation of the work of Mr. Nicholson over a long period of years and of the tireless energy which he has brought to its activities.

List of Commercial Standards Issued

A list of all Commercial Standards, revised to July 1, 1937, has been issued by the Division of Trade Standards, National Bureau of Standards. The mimeographed document is available without charge from the Division.

N.F.P.A. Proposes New Safety Requirements For Installing Air Conditioning Systems

EXTENSIVE changes in American Standard safety requirements for installation of air conditioning and ventilating systems have resulted in submittal of a revision of the standard to the American Standards Association for approval. The National Fire Protection Association, which developed the standards as minimum requirements to protect both life and property from fire hazards, submitted the revisions as proprietary sponsor.

Two standards are proposed to take the place of the original American Standard. One is entitled "Regulations for the Installation of Air Conditioning, Warm Air Heating, Air Cooling and Ventilating Systems," the other "Regulations for the Installation of Blower and Exhaust Systems for Dust, Stock, and Vapor Removal."

"The rapid development of air conditioning has made it desirable in our opinion to have a separate standard to cover this subject rather than including it in the general standard as previously," said the National Fire Protection Association in submitting the two new standards. "While the fundamental principles are unchanged from the 1933 standard, much of the material pertaining to air-conditioning installations is new. The standard on the Installation of Blower and Exhaust Systems for Dust, Stock and Vapor Removal includes relatively few changes."

The proposed new standards are a revision of the American Standard approved in 1935 by the American Standards Association. A revised standard on air conditioning, developed by the National Fire Protection Association in 1936, was widely circulated for criticism but was not submitted to the ASA. The present edition incorporates changes suggested following the wide circulation of the 1936 proposal. It was approved by the National Fire Protection Association at its annual meeting in May with amendments approved by the Board of Directors of the National Fire Protection Association in June.

New York Groups Study Schools' Safety Practices

The Greater New York Safety Council and the New York Board of Education are conducting a survey of the safety practices in vocational high schools in New York City. Because many of the pupils in the vocational high schools enter industry immediately upon graduation, it is regarded as important that they know how to handle themselves in the machine shops and factories, announcement of the project says.

A committee of industrial experts will study and analyze the vocational school accidents of last year, as well as the accident experiences of industrial occupations covered by vocational schools. Each of the 23 vocational high school buildings will be examined and recommendations for improvements made. The committee will watch the teachers and students at work, and will draw up plans for improving conditions.

"We are concerned that pupils should get safety education that will carry over when they get into industry," Julien H. Harvey, executive vice-president of the Greater New York Safety Council, explained. "About 80,000 boys and girls attend our vocational schools today. In ten years over 100,000 of them will take their places in industry. It is important to implant in their minds the value and lessons of safety."

The safety committee will act as a guidance council to advise students on the hazards to be found within industry itself, according to Mrs. Betty A. Hawley, executive secretary of the Advisory Board on Industrial Education. The nature of occupational diseases will be analyzed and considered, she said, and a boy who wants to go into a trade where working conditions are "dusty" and who is found to have a bad lung, will be advised to try another occupation.

Howard Coonley, Walworth Company, past-president of the American Standards Association, is chairman of the committee, and Edward P. Durfee, Consolidated Edison Company of New York, is vice-chairman.

Cyril Ainsworth, assistant secretary of the American Standards Association, is a member of the technical committee which will assist in the study.

Editors, Teachers, Students Learn About Gas Appliance Standards

Editors of home economics departments of prominent magazines and newspapers, home economics teachers, and home service directors of utility companies and gas appliance manufacturers attended the annual Home Service Conference and Training Course sponsored by the Home Service Committee of the American Gas Association June 15-18. The purpose of the conference was to give a better understanding of the American Gas Association Laboratories' program built around the following five points:

1. **Developing and securing national acceptance for complete standards of construction and performance for all types of gas appliances and their accessories.**
2. **Testing, certifying, and annually inspecting appliances and accessories for compliance with above standards and badging such goods.**
3. **Conducting research investigations.**
4. **Providing for manufacturers, etc., facilities for developing testing, and counsel.**
5. **Assisting in educational endeavors of the industry.**

A trip through the Laboratories, prefaced by an illustrated talk on the "Story of the American Gas Association Testing Laboratories," gave the visitors an idea of the work done by the Association in testing appliances and accessories in accordance with national standards. Standards followed by the Laboratories, to which gas appliances and accessories must comply before receiving the approval of the American Gas Association, are developed by the A.G.A. Committee on Approval and Installation Requirements for Gas-Burning Appliances, a sectional committee of the American Standards Association. Twenty-six standards submitted by this committee have been approved by the ASA.

A model kitchen, fitted with gas appliances meeting standard requirements, was demonstrated before the conference

Shoe Laces Now Standard Lengths

A 27-inch shoe lace now should measure 27 inches and not 26 inches or 28 inches, according to a recent announcement of the Division of Simplified Practice, National Bureau of Standards. Simplified Practice Recommendation R168-37, just completed by the Division, sets up 12 standard lengths of braided shoe laces, and provides that measurements shall be made under a tension of three ounces.

The braided fabric shoe lace is elastic and under different methods of measuring wide variations in any one length sometimes resulted. For instance, a lace sold as a 27-inch lace sometimes varied from 26 inches to 28 inches.

The Shoe Lace Institute, Providence, R. I., which asked the help of the Division of Simplified Practice, National Bureau of Standards, in establishing a simplified list of lengths for braided shoe laces, will furnish information about a simple device for making the standard test for length. Shoe manufacturers and large users of laces, such as Government establishments, as well as the shoe lace industry, are using the uniform method of measuring shoe laces.

All standard lengths are subject to a tolerance of plus or minus two per cent when measured under proposed uniform conditions.

Until printed copies are available, complimentary mimeographed copies of this Simplified Practice Recommendation may be obtained from the Division of Simplified Practice, National Bureau of Standards, Washington, D. C.

SAE Issues Standard For Bad-Weather Lamps

A new specification for adverse-weather lamps for motor vehicles has been prepared by the Society of Automotive Engineers. Copies are now available from the SAE, 29 West 39 Street, New York, at 25 cents each.

Courtesy Safety Engineering

This school looks well protected—but the tangle of fire escapes passes many unprotected windows, and ends over the boiler room. Fire breaking from the windows may easily make the stairways impassable, and the boiler room may explode during a fire. The use of the Building Exits Code would prevent such mistakes.

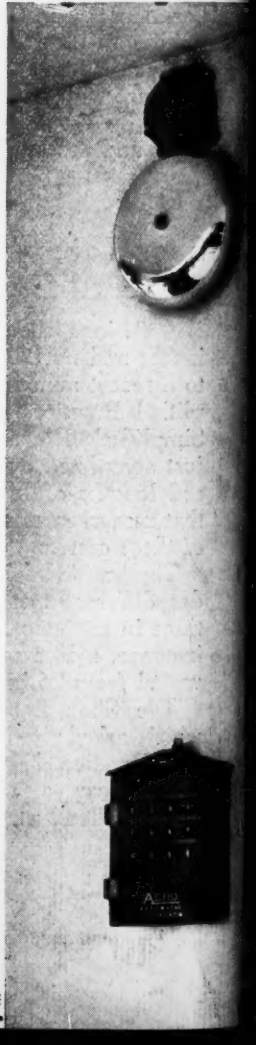
SAFETY

When Minutes Count

Escape from fire is a matter of minutes.—Do you *know* if your building meets the requirements of the Building Exits Code?

- It tells when stairways, doors and fire escapes are reasonably safe — what fire alarm systems are necessary.
- It tells how to conduct fire drills.
- It describes the special precautions needed for schools, department stores, factories, hospitals, auditoriums, hotels, apartment houses.

Courtesy American District Telegraph Co.



Check Your Fire Protection—

American Tentative Standard Building Exits Code (A9-1937) - - 75 cents

(Developed by a representative committee under the administrative direction of the National Fire Protection Association. This new edition extends the Code provisions to hotels and apartment houses.)

20% Discount to ASA Members

American Standards Association

29 West 39 Street New York, N. Y.